

REMARKS/ARGUMENTS

As set forth in the Office Action, claims 1-20 were rejected as being unpatentable over Aditya (U.S. Patent 5,918,021), Hebert (U.S. Patent 6,728,780) and Trachewsky (U.S. Patent 6,898,204). Claims 1, 2, 4 and 11 are amended. Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

Attorney for applicants held a telephonic interview with Examiner Pierre-Louis and Primary Examiner Rodriguez on October 26, 2005. During the interview Aditya was discussed as were the presently-amended claims. Agreement was reached that the amendments and remarks clearly distinguished Aditya. Applicants thank the Examiners and the patent office for the interview.

Aditya discloses a load balancing mechanism, in which multiple physical interfaces 141 (or adapters 241) are aggregated to appear as one virtual interface to a host operating system 125 (or 224). In this manner, the one virtual network interface has the aggregated bandwidths of the multiple physical interfaces. Adaptive driver software 126 (or 225) is responsible for aggregating the interfaces and for deciding which physical interface to use for a given communication. The adaptive driver software uses a load balancing algorithm to determine which particular interface to use in a given instant. The detailed description purports to describe a load balancing algorithm that is different than that described in the background. In all instances, communication is carried from the server node 220 to a processor node 210 via a switch 250. There is no Ethernet emulation described, and instead Aditya describes real, not emulated, Ethernet. There is no bypassing of the network switch.

Hebert discloses a networking system with a warm standby network interface that can be used in case of a failover. In all cases, communication is directly between the same two nodes, e.g., database server and an application server. There is no Ethernet emulation described; nor does Hebert's disclosure pertain to switching.

Trachewsky discloses a method of determining a collision between a plurality of transmitting stations in a frame-based communications network. There is no Ethernet emulation described.

Unlike any of the cited art (alone or in combination), the amended claims are directed to a computing platform in which Ethernet semantics are being emulated using a non-Ethernet switch fabric having point to point communication. More particularly, the claimed invention is directed to a particular Ethernet emulation system and method in which virtual interfaces are established with a non-Ethernet switch fabric to allow direct or indirect unicast communication between two computer processors or nodes.

One set of the interfaces follows a more conventional emulation approach in which communication is indirect between computer nodes. These communications pass from one node to another via the switch fabric and via the switch node (i.e., the processor emulating the Ethernet switch). One can think of these communications as set forth below:

node1→Ethernet switch→node2

The “Ethernet switch” in this notation is a combination of a non-Ethernet switch fabric and the switch node that is emulating Ethernet (i.e., providing the Ethernet semantics to the non-Ethernet medium).

The other set of interfaces follows a new approach that bypasses the switch node that is emulating Ethernet. (Under conventional thinking this may be considered a violation of switched Ethernet semantics; but the invention uses and enables such for its efficiencies in unicast communication.) These communications pass from one node to another via the switch fabric but avoid the switch node. One can think of these communications as set forth below:

node1→ node2

That is, the communication bypasses or avoids the switch node, i.e., the entity providing the Ethernet switch semantics.

The claimed invention not only provides for both sets of interfaces but allows the system or method to switch from the direct communication to the indirect communication, if certain criteria are not met.

These features are found in independent claims 1 and 11. Therefore these claims and all their dependent claims should be found allowable. The dependent claims recite other novel features too. For example, claims 4 and 14 recite an arrangement in which different interfaces are used for node1 to communicate to node2 than those used for node2 to communicate with

node1.; claims 5 and 15 refer to an arrangement in check summing may be disabled; and claims 10 and 20 refer to an arrangement in which messages may exceed MTU.

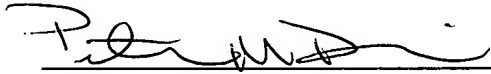
It seems that the original claims received an unintended interpretation and that the above described features were not apparent even though applicants believe they were within the original claim scope. Applicants believe that the present amendments will avoid the unintended interpretations and should make these distinctive aspects more apparent.

For the reasons stated above, we believe that the claims are allowable.

The Commissioner is hereby authorized to charge the required fee of \$60.00 for filing the request for extension of time to our Deposit Account No. 08-0219. Please apply any charges not covered, or any credits, to Deposit Account No. 08-0219.

Respectfully submitted,

Date: OCT 26 2005


Peter M. Dichiaro
Reg. No. 38,005

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, MA 02109
Telephone: (617) 526-6466
Facsimile: (617) 526-5000